

REMARKS

Claims 1, 2, 4, 6-12, and 15-20 are pending in the application and claims 1, 2, 4, 6-12, and 15-20 stand rejected.

Claim Rejections under 35 U.S.C. §112, First Paragraph

Claims 1, 2, 4, 6-12, and 15-20 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

The Examiner asserts that the figures and the specification do not illustrate and provide support for “the end portion of the current blocking layer in contact with the upper surface of said second nitride based semiconductor layer.” Claims 1, 7, 11, 12 and 15 have been amended to indicate that the current blocking layer (9) comes in contact with the second GaN layer (10), but not with the upper surface of the second GaN layer (10). This finds support in Figure 1 of the present application.

Therefore, withdrawal of the rejection of claims 1, 2, 4, 6-12, and 15-20 under 35 U.S.C. §112, first paragraph is respectfully requested.

Claim Rejections under 35 USC §102

Claims 1, 2, 4 and 9 stand rejected under 35 U.S.C. §102(e) as being anticipated by Bour et al. (U.S. 2003/0053504).

The present invention provides for an AlGa_N cladding layer (7), a first Ga_N layer (8), covered by a current blocking layer (9). An opening (W_1) is provided in the current blocking layer (9) which is significantly smaller than the width (W_2) of the first Ga_N layer (8). As shown in Figure 2 and discussed on page 21, lines 5-16 of the specification the ratio of W_2/W_1 is between 0.1 and 0.95 and preferably between 0.1 and 0.8. Further, a second Ga_N layer (10) is provided on top of the current blocking layer (9).

Bour et al. describes a laser diode having a growth substrate (110) on which is placed a layer (115) made of AlGa_N:Si to reduce optical leakage. In contact with layer (115) is a n-electrode (195). A n-type cladding layer (121) is placed on layer (115). In this embodiment photoresist is applied to layer (185) to define the top of ridge structure (111). A burying layer (155) is positioned over layer (185) with windows through burying layer (155) to allow p-electrode (190) to contact layer (185) and n-electrode (195) to contact layer (115).

Bour et al. has a U.S. filing date of September 29, 1999, and a publication date of March 20, 2003. The U.S. filing date of the instant application is March 22, 2000, and the filing date of the original Japanese application upon which this application claims priority is March 24, 1999.

Therefore, Bour et al. should not be considered as prior art provided under 35 U.S.C. § 102(e) because of the present application claims priority March 24, 1999 which is before the filing date of Bour et al.

Therefore, withdrawal of the rejection of claims 1, 2, 4 and 9 under 35 U.S.C. § 102(e) as being anticipated by Bour et al. (U.S. 2003/0053504) is respectfully requested.

Claim Rejections under 35 USC §103

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bour et al. (US 2003/0053504) as applied to claims 1 and 2 and further in view of Sugiura et al. (PN 5,932,896).

Sugiura et al. describes a semiconductor device in which the current blocking layer is composed of indium and gallium.

Claim 6 is allowable by virtue of its dependence upon an allowable independent claim. Therefore, withdrawal of the rejection of Claim 6 under 35 U.S.C. §103(a) as being unpatentable over Bour et al. (US 2003/0053504) and further in view of Sugiura et al. (PN 5,932,896) is respectfully requested.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bour et al. (US 2003/0053504).

Claim 10 is allowable by virtue of its dependence upon an allowable independent claim. Therefore, withdrawal of the rejection of claim 10 under 35 U.S.C. §103(a) as being unpatentable over Bour et al. (US 2003/0053504) is respectfully requested.

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bour et al. (US 2003/0053504) as applied to claims 1 and 4.

Claim 19 is allowable by virtue of its dependence upon an allowable independent claim. Therefore, withdrawal of the rejection of claim 19 under 35 U.S.C. §103(a) as being unpatentable

over Bour et al. (US 2003/0053504) is respectfully requested.

Conclusion


In view of the aforementioned amendments and accompanying remarks, claims 1, 2, 4, 6-12 and 15-20, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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